optical system, thereby projecting and exposing said pattern on said mask onto said substrate through said projection optical system, comprising:

a base [for holding remaining constituent] that holds the following elements;

a moving table [for mounting] that mounts one of said mask and said substrate and [moving] that moves one of said mask and said substrate with respect to said base;

a driving unit [for driving] that drives said moving table with respect to said base;

a switch [for stopping] that stops an operation of said driving unit when said moving table moves beyond an allowable movement range [for allowing movement of] by which said moving table is allowed to move with respect to said base; and

a push-back portion [for generating] that generates a biasing force [for pushing] to push back said moving table to the allowable movement range [side] at a timing before said switch operates.

13. (Amended) An apparatus according to claim 11, wherein said switch has a switch main body and a sliding portion [sliding] that is slidable with respect to said switch main body.

14. (Amended) An apparatus according to claim 11, wherein said switch has a switch main body and a rotating portion [rotating] that is rotatable with respect to said switch main body.

16. (Amended) A drive table which is two-dimensionally driven, comprising:

a base [for holding remaining constituent] that holds the following elements;

a table [for mounting] that mounts an object thereon;

a driving system [for] that two-dimensionally [driving] drives said table, with respect to said base, along a plane defining [on which] an X-Y reference coordinate system [is set], said X-Y reference coordinate system being fixed relative to said base;

a position [detection unit for detecting] detector that detects a position of said table;

a reference position [detection unit for generating] detector that generates a detection signal when a predetermined point on said table reaches a predetermined reference position on said X-Y reference coordinate system; and

a [calculation unit for converting] calculator that converts a detection value from said position detector [detection unit] into a coordinate value in said X-Y reference coordinate system in accordance with the detection signal obtained from said reference position detector [detection unit] and a detection value from said position [detection unit] detector, which is obtained upon generation of the detection signal.

17. (Amended) A table according to claim 16, wherein said position detector [detection unit] detects a position in an X direction, said reference position detector [detection unit] detects a reference position with respect to the X direction, and said [calculation unit] calculator calculates a coordinate value in the X direction.

18. (Amended) A table according to claim 16, wherein said position detector [detection unit] detects a position in a Y direction, said reference position detector [detection unit] detects a reference position with respect to the Y direction, and said [calculation unit] calculator calculates a coordinate value in the Y direction.

19. (Amended) A table according to claim 16, wherein said position detector [detection unit] detects a rotation amount about a θ axis perpendicular to X and Y axes, and

said reference position detector [detection unit] detects a reference position with respect to a rotation about said θ axis.

21. (Amended) A table according to claim 16, wherein said reference position detector [detection unit] has a light-shielding plate arranged at a predetermined position on said table, and a reference position detection sensor [for generating] that generates the detection signal when said light-shielding plate reaches the predetermined reference position.

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22. (Amended) A table according to claim 21, wherein said reference position detection sensor comprises at least two reference position detection sensors, and said [calculation unit] calculator obtains a reference rotation amount about a θ axis from a shift between timings of detection signals generated from said two reference position detection sensors.

23. (Amended) A table according to claim 16, wherein said reference position detector [detection unit] comprises:

a reference stopper fixed with respect to said X-Y reference coordinate system[,];

a driving portion [for pressing] that presses a side surface of said table against said reference stopper[,]; and

a press detection portion [for detecting] that detects that said side surface of said table is pressed against said reference stopper.

Please add the following claims 24-104:

--24. An apparatus according to claim 11, wherein said moving table mounts said mask thereon, and further comprising a substrate stage on which said substrate is mounted.--

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--25. An apparatus according to claim 11, wherein said moving table mounts said substrate thereon, and further comprising a mask stage on which said mask is mounted.--

--26. A stage apparatus for scanning an object of scanning that includes at least one of a mask and a photosensitive substrate, said stage apparatus being provided to a scanning exposure apparatus that illuminates said mask on which a transfer pattern is formed and scans said mask in a predetermined scanning direction and synchronously scans said substrate in a direction corresponding to said scanning direction, thereby exposing said pattern on said mask onto said substrate, comprising:

a base;

a scanning stage that is movable in said scanning direction on said base;

a fine adjustment stage that is movable within predetermined ranges in said scanning direction and in a direction perpendicular to said scanning direction with respect to said scanning stage, said fine adjustment stage mounting said object of scanning thereon, said fine adjustment stage having a movable mirror;

actuators arranged in said scanning direction and in the direction perpendicular to said scanning direction with respect to said scanning stage for driving said fine adjustment stage;

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said fine adjustment stage with respect to said scanning stage; and

a cooling unit that cools said actuators by circulating a predetermined cooling fluid, said cooling unit circulating said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--27. An apparatus according to claim 26, wherein said fine adjustment stage mounts said mask thereon, and further comprising a substrate stage on which said substrate is mounted.--

--28. An apparatus according to claim 26, wherein said fine adjustment stage mounts said substrate thereon, and further comprising a mask stage on which said mask is mounted.--

--29. An apparatus according to claim 26, wherein at least one of said actuators is constituted by a pair of subactuators which are parellelly arranged.--

--30. A stage apparatus comprising:

a first stage that is movable linearly in a first direction;

a second stage that is movable in said first direction and in a second direction perpendicular to said first direction with respect to said first stage;

a first actuator that drives said second stage with a second thrust in said second direction with respect to said first stage; and

a second actuator that drives said second stage with a first thrust in said first direction with respect to said first stage, said first thrust being larger than said second thrust.--

--31. An apparatus according to claim 30, wherein said first actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said first actuator is fixed to said first stage.--

--32. An apparatus according to claim 30, wherein said second actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said second actuator is fixed to said first stage.--

--33. An apparatus according to claim 31, further comprising a cooling unit that cools said stationary member of said first actuator by circulating a cooling fluid.--

--34. An apparatus according to claim 32, further comprising a cooling unit that cools said stationary member of said second actuator by circulating a cooling fluid.--

--35. An apparatus according to claim 33, wherein said second stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said second stage with respect to said first stage;

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--36. An apparatus according to claim 34, wherein said second stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said second stage with respect to said first stage; and

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--37. An apparatus according to claim 30, wherein at least one of said first and second actuators is constituted by a pair of subactuators which are parellelly arranged.--

--38. A stage apparatus comprising:

a first stage that is movable linearly in a first direction;

a second stage that is movable in said first direction and in a second direction perpendicular to said first direction with respect to said first stage;

a first actuator that drives said second stage with a second thrust in said second direction with respect to said first stage; and

a second actuator that drives said second stage with a first thrust in said first direction with respect to said first stage, said first thrust being different from said second thrust.--

--39. An apparatus according to claim 38, wherein said first actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said first actuator is fixed to said first stage.--

--40. An apparatus according to claim 38, wherein said second actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said second actuator is fixed to said first stage.--

--41. An apparatus according to claim 39, further comprising a cooling unit that cools said stationary member of said first actuator by circulating a cooling fluid.--

--42. An apparatus according to claim 40, further comprising a cooling unit that cools said stationary member of said second actuator by circulating a cooling fluid.--

--43. An apparatus according to claim 41, wherein said second stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said second stage with respect to said first stage; and

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--44. An apparatus according to claim 42, wherein said second stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said second stage with respect to said first stage; and

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--45. An apparatus according to claim 38, wherein at least one of said first and second actuators is constituted by a pair of subactuators which are parellelly arranged.--

--46. A stage apparatus for scanning an object of scanning that includes at least one of a mask and a photosensitive substrate, said stage apparatus being provided to a scanning exposure apparatus that illuminates said mask on which a transfer pattern is formed and scans said mask in a predetermined scanning direction and synchronously scans said substrate in a direction corresponding to said scanning direction, thereby exposing said pattern on said mask onto said substrate, comprising:

a base;

a scanning stage that is movable in said scanning direction on said base;

a fine adjustment stage that is movable within predetermined ranges in said scanning direction and in a direction perpendicular to said scanning direction with respect to said scanning stage, said fine adjustment stage mounting said object of scanning thereon;

actuators arranged in said scanning direction and in the direction perpendicular to said scanning direction with respect to said scanning stage, said actuators driving said fine adjustment stage; and

a cooling unit that cools said actuators by circulating a predetermined cooling fluid, said cooling unit circulating said cooling fluid from said actuators arranged in the direction perpendicular to said scanning direction with respect to said scanning stage for driving said fine adjustment stage.--

--47. An apparatus according to claim 46, wherein said fine adjustment stage mounts said mask thereon, and further comprising a substrate stage on which said substrate is mounted.--

--48. An apparatus according to claim 46, wherein said fine adjustment stage mounts said substrate thereon, and further comprising a mask stage on which said mask is mounted.--

--49. An apparatus according to claim 46, wherein said actuators arranged in said scanning direction are electromagnetic actuators of a moving magnet type, and a stationary member having a coil of said electromagnetic actuators is fixed to said scanning stage.--

--50. An apparatus according to claim 46, wherein said actuators arranged in the direction perpendicular to said scanning direction are electromagnetic actuators of a moving magnet type, and a stationary member having a coil of said electromagnetic actuators is fixed to said scanning stage.--

--51. An apparatus according to claim 49, wherein said cooling unit cools said stationary member.--

--52. An apparatus according to claim 50, wherein said cooling unit cools said stationary member.--

--53. An apparatus according to claim 46, wherein at least one of said actuators is constituted by a pair of subactuators which are parellelly arranged.--

--54. A lithographic device comprising the following elements supported in the following order:

a substrate stage that is positionable by a first positioning device parallel to a first direction;

an imaging system having a main axis directed parallel to a vertical direction perpendicular to the first direction;

a mask stage that is positionable at least parallel to the first direction by a second positioning device; and

an illumination optical system that irradiates an exposure illumination light beam;

wherein the second positioning device includes a first actuator that positions the mask stage over a comparatively small movement parallel to the first direction, and a second actuator that positions the mask stage over a comparatively large movement parallel to the first direction, the first actuator being driven at least when the second actuator is being at least one of accelerated and decelerated.--

--55. A device according to claim 54, wherein said first actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said first actuator is fixed to a support.--

--56. A device according to claim 55, further comprising a cooling unit that cools said stationary member by circulating a cooling fluid.--

--57. A device according to claim 56, wherein a portion of said mask stage that moves with a moving magnet of said first actuator has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said portion that moves with said moving magnet relative to said support;

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--58. A device according to claim 54, wherein said first actuator is an electromagnetic actuator constituted by a pair of subactuators which are parellelly arranged.--

--59. A scanning exposure apparatus that moves a mask with respect to a projection optical system while illuminating said mask on which a transfer pattern is formed and synchronously moves a photosensitive substrate with respect to said projection optical

system, thereby projecting and exposing said pattern on said mask onto said substrate through said projection optical system, comprising:

a base that holds the following elements;

a scanning stage that is movable, with respect to said base, along a first direction corresponding to a moving direction of said mask and said substrate;

a fine adjustment stage that is movable along the first direction with respect to said scanning stage, said fine adjustment stage mounting one of said mask and said substrate; and

an actuator that drives said fine adjustment stage at least when said scanning stage is being at least one of accelerated and decelerated during a scanning exposure operation.--

--60. An apparatus according to claim 59, wherein said fine adjustment stage mounts said mask thereon, and further comprising a substrate stage on which said substrate is mounted.--

--61. An apparatus according to claim 59, wherein said fine adjustment stage mounts said substrate thereon, and further comprising a mask stage on which said mask is mounted.--

--62. An apparatus according to claim 59, wherein said actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to said scanning stage.--

--63. An apparatus according to claim 62, further comprising a cooling unit that cools said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--64. An apparatus according to claim 63, wherein said fine adjustment stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said fine adjustment stage with respect to said scanning stage;

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--65. An apparatus according to claim 59, wherein said actuator is constituted by a pair of subactuators which are parellelly arranged.--

--66. A stage apparatus comprising:

a first stage that is linearly movable in a first direction;

a second stage that is movable in said first direction with respect to said first stage; and

an actuator that drives said second stage in said first direction, said actuator driving said second stage at least when said first stage is being at least one of accelerated and decelerated.--

--67. An apparatus according to claim 66, wherein said actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to said first stage.--

--68. An apparatus according to claim 67, further comprising a cooling unit that cools said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--69. An apparatus according to claim 68, wherein said second stage has a movable mirror; and further comprising:

an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said second stage with respect to said first stage;

wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--70. An apparatus according to claim 66, wherein said actuator is constituted by a pair of subactuators which are parellelly arranged.--

--71. A stage driving method for driving, in a predetermined direction, a first stage that is arranged to be movable linearly in a first direction and for driving a second stage that is arranged to be movable at least in said first direction with respect to said first stage, comprising the steps of:

driving said first stage; and

driving said second stage at least when said first stage is being at least one of accelerated and decelerated.--

--72. A method according to claim 71, wherein said second stage is driven by an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to said first stage.--

--73. A method according to claim 72, further comprising the step of cooling said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--74. A method according to claim 73, wherein said second stage has a movable mirror, said method further comprising the step of:

irradiating a measurement light beam from an interferometer on said movable mirror to detect a displacement of said second stage with respect to said first stage, wherein a cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

Sub C18

--75. A method according to claim 71, wherein an electromagnetic actuator that drives said second stage is constituted by a pair of subactuators which are parellelly arranged.--

--76. A stage driving method for scanning an object that includes at least one of a mask and a photosensitive substrate, in a scanning exposure apparatus that illuminates said mask on which a transfer pattern is formed and scans said mask in a predetermined scanning direction and synchronously scans said substrate in a direction corresponding to said scanning direction, thereby exposing said pattern onto said substrate, said method comprising the steps of:

driving a first stage in said scanning direction, said first stage being used for scanning one of said mask and said substrate; and

driving a second stage in said scanning direction at least when said first stage is being at least one of accelerated and decelerated during said scanning exposure, said second stage being movable in said scanning direction with respect to said first stage, and said second stage mounting said object thereon.--

--77. A method according to claim 76, wherein said second stage mounts said mask thereon, and said scanning exposure apparatus further comprises a substrate stage on which said substrate is mounted.--

--78. A method according to claim 76, wherein said second stage mounts said substrate thereon, and said scanning exposure apparatus further comprises a mask stage on which said mask is mounted.--

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--79. A method according to claim 76, wherein an electromagnetic actuator that drives said second stage is of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to said first stage.--

--80. A method according to claim 79, further comprising the step of cooling said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--81. A method according to claim 80, wherein said second stage includes a movable mirror, said method further comprising the step of:

irradiating a measurement light beam from an interferometer on said movable mirror to detect a displacement of said second stage with respect to said first stage, wherein a cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--82. A method according to claim 76, wherein said second stage is driven by an electromagnetic actuator that is constituted by a pair of subactuators which are parellelly arranged.--

--83. A method for making an exposure apparatus that transfers a pattern of a mask onto a substrate, comprising the steps of:

providing a substrate stage on which said substrate is mounted;

providing a first positioning device that positions said substrate stage parallel to a first direction;

providing an imaging system having a main axis directed parallel to a vertical direction and perpendicular to the first direction;

providing a mask stage on which said mask is mounted;

providing a second positioning device that positions said mask stage at least parallel to the first direction; said second positioning device having a first actuator that positions said mask stage over a comparatively small movement parallel to the first direction, and a second actuator that positions said mask stage over a comparatively great movement

parallel to the first direction the first actuator being driven at least when the second actuator is being at least one of accelerated and decelerated; and

providing an illumination optical system that irradiates an exposure illumination light beam.--

--84. A method according to claim 83, wherein said first actuator is an electromagnetic actuator of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to a support.--

--85. A method according to claim 84, further comprising the step of providing a cooling unit that cools said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--86. A method according to claim 85, wherein a portion of said mask stage that moves with a moving magnet of said electromagnetic actuator has a movable mirror; and further comprising the step of:

providing an interferometer that irradiates a measurement light beam on said movable mirror to detect a displacement of said portion of said mask stage that moves with said moving magnet relative to said support, wherein said cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--87. A method according to claim 83, wherein said first actuator is constituted by a pair of subactuators which are parellelly arranged.--

--88. A method of operating an exposure apparatus to transfer a pattern on a mask onto a substrate, the apparatus having a projection optical system, a first stage that is movable along a first direction with respect to the projection optical system, and a second stage that is

movable along the first direction with respect to the first stage, the second stage mounting one of said mask and said substrate thereon, the method comprising the steps of:

driving the first stage in the first direction; and

driving the second stage in the first direction at least when the first stage is being at least one of accelerated and decelerated.--

--89. A method according to claim 88, wherein said second stage mounts said mask thereon, and said exposure apparatus further comprises a substrate stage on which said substrate is mounted.--

--90. A method according to claim 88, wherein said second stage mounts said substrate thereon, and said exposure apparatus further comprises a mask stage on which said mask is mounted.--

--91. A method according to claim 88, wherein an electromagnetic actuator that drives said second stage is of a moving magnet type, and a stationary member having a coil of said electromagnetic actuator is fixed to said first stage.--

--92. A method according to claim 91, further comprising the step of cooling said stationary member of said electromagnetic actuator by circulating a cooling fluid.--

--93. A method according to claim 92, wherein said second stage includes a movable mirror, said method further comprising the step of:

irradiating a measurement light beam from an interferometer on said movable mirror to detect a displacement of said second stage with respect to said first stage, wherein a cooling unit circulates said cooling fluid from a portion near an optical path of the light beam from said interferometer toward a distant portion.--

--94. A method according to claim 88, wherein said second stage is driven by an electromagnetic actuator that is constituted by a pair of subactuators which are parellelly arranged.--

--95. A semiconductor element made by utilizing the scanning exposure apparatus of claim 11.--

--96. A liquid crystal display element made by utilizing the scanning exposure apparatus of claim 11.--

--97. A semiconductor element made by utilizing the lithographic device of claim 54.--

--98. A liquid crystal display element made by utilizing the lithographic device of claim 54.--

--99. A semiconductor element made by utilizing the scanning exposure apparatus of claim 59.--

--100. A liquid crystal display element made by utilizing the scanning exposure apparatus of claim 59.--

--101. A method of making a semiconductor element comprising utilizing the exposure apparatus made by a method according to claim 83.--

--102. A method of making a semiconductor element comprising operating an exposure apparatus according to claim 88.--

--103. A method of making a liquid crystal display element comprising utilizing the exposure apparatus made by a method according to claim 83.--

--104. A method of making a liquid crystal display element comprising operating an exposure apparatus according to claim 88.--